

## CLAIMS

We claim:

1. A quinoa protein concentrate having a protein content of at least about 50 wt % on a dry weight basis.
2. The quinoa protein concentrate of claim 1 wherein said protein content is at least about 70 wt % on a dry weight basis.
3. The quinoa protein concentrate of claim 2 wherein said protein content is at least about 90 wt % on a dry weight basis.
4. The quinoa protein concentrate of claim 1 which is in a dry powdered form.
5. A method of processing quinoa grain to isolate protein comprising the steps of:
  - (a) comminuting or flaking the quinoa grain,
  - (b) extracting the oil from the preparation of step (a) leaving defatted quinoa,
  - (c) extracting the protein from the defatted quinoa in alkaline solution,
  - (e) separating solubilized protein in the alkaline solution leaving starch and fiber,
  - (f) drying the solubilized protein,whereby a quinoa protein concentrate containing at least about 50 wt% protein is obtained.
6. The method of claim 5 further comprising a step of purifying the protein by iso-electric precipitation at an appropriate pH after step (e) but before step (f).
7. The method of claim 5 wherein the pH of step (c) is in the range of about 8.0 – 12.0.

8. The method of claim 5 wherein the extraction in step (2) is carried out by a solvent or a mechanical means.
9. A quinoa protein concentrate having a protein content of at least about 50 wt % on a dry weight basis, which is prepared by the method of claim 5.
10. Quinoa starch isolated according to the method of claim 5.
11. Quinoa fiber isolated according to the method of claim 5.
12. Quinoa oil isolated according to the method of claim 5.
13. A product comprising the quinoa protein concentrate of claims 1-3.
14. The product of claim 13 which is a food product for infants.
15. An animal feed comprising the quinoa protein concentrate of claims 1-3.
16. A quinoa oil preparation having at least 80 wt% oil on a dry weight basis.
17. A quinoa starch preparation having at least 80 wt% starch on a dry weight basis.
19. A quinoa fiber preparation having at least 50 wt% fiber on a dry weight basis.